ABSTRACT

The invention relates to a method and a software product for selecting an optimal path in an ATM network. The proposed method of optimal path selection is applicable to quite a wide class of ATM networks or parts thereof which comprise a plurality of links satisfying the condition that each of the mandatory parameters CDV, MaxCTD and AW has one value symmetric to both directions of a link. Such a plurality of links and values of its parameters may, for example, be obtained after applying a GCAC algorithm to the initial network description, and is represented in the form of a network database. The method comprises obtaining two limitations of end-to end QoS parameters of the path to be selected ($MaxCTD_{QoS}$ and CDV_{QoS}), constructing a link cost equation, using the equation, forming a modified network and calculating links' costs thereof, forming one or more data bases of link costs for different weight ratios of members in the link cost equation, and applying a shortest path algorithm to each of the formed data bases to determine one or more conditional paths in these data bases. The shortest path algorithm is capable of selecting a minimal cost path among paths limited by a given number of links to satisfy the limitation CDV_{QoS}, and selecting from the conditional paths the one which better satisfies the limitation $MaxCTD_{QoS}$.